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## PART I - ADMINISTRATIVE

### Section 1. General administrative information

Title of project

Multi-Year Lower Snake River Mainstem Anadromous Fish Plan

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BPA project number: 20533

Contract renewal date (mm/yyyy): ☐ Multiple actions?

Business name of agency, institution or organization requesting funding

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Business acronym (if appropriate) CBFWA

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Proposal contact person or principal investigator:

Name Tom Giese

Mailing Address

City, ST Zip

Phone 503-229-0191

Fax

Email address

NPPC Program Measure Number(s) which this project addresses

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FWS/NMFS Biological Opinion Number(s) which this project addresses

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Other planning document references

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Short description

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Target species

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### Section 2. Sorting and evaluation

Subbasin

Lower Snake River Mainstem

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**Evaluation Process Sort**

<b>CBFWA caucus</b>	<b>Special evaluation process</b>	<b>ISRP project type</b>
Mark one or more caucus	If your project fits either of these processes, mark one or both	Mark one or more categories
<input type="checkbox"/> Anadromous fish <input type="checkbox"/> Resident fish <input type="checkbox"/> Wildlife	<input type="checkbox"/> Multi-year (milestone-based evaluation) <input type="checkbox"/> Watershed project evaluation	<input type="checkbox"/> Watershed councils/model watersheds <input type="checkbox"/> Information dissemination <input type="checkbox"/> Operation & maintenance <input type="checkbox"/> New construction <input type="checkbox"/> Research & monitoring <input type="checkbox"/> Implementation & management <input type="checkbox"/> Wildlife habitat acquisitions

**Section 3. Relationships to other Bonneville projects**

***Umbrella / sub-proposal relationships.*** List umbrella project first.

Project #	Project title/description
20533	MYP Snake River Mainstem Anadromous Fish Plan
9102800	M&E of wild juvenile Snake River spring/summer chinook outmigration.
9801003	M&E the spawning distribution of fall chinook.
9801004	Rearing and migration of yearling fall chinook upstream of Lwr. Granite Dam
9801005	Development and operations of fall chinook several acclimation facilities.
9102800	Research & monitoring of fall chinook life histories.
9102900	Research & monitoring of fall chinook life histories.
9403400	Summer/fall chinook restoration.
9801003	Juvenile fall chinook survival studies.
8000200	Monitoring
8611900	Monitoring
9204600	Monitoring
9401004	Monitoring

***Other dependent or critically-related projects***

Project #	Project title/description	Nature of relationship

## Section 4. Objectives, tasks and schedules

### *Past accomplishments*

Year	Accomplishment	Met biological objectives?

### *Objectives and tasks*

Obj 1,2,3	Objective	Task a,b,c	Task
1	Improve survival of juvenile salmonids.	a	Use adaptive management to determine whether program changes are needed in order to meet restoration objectives.
		b	Support and track the PATH effort for assessment of fall, spring and summer chinook and summer steelhead response to breaching the lower four Snake River dams.
2	Reduce pre-spawning mortality of adult salmonids.	a	Use adaptive management to determine whether program changes are needed in order to meet restoration objectives.
		b	Support and track the PATH effort for assessment of fall, spring and summer chinook and summer steelhead response to breaching the lower four Snake River dams.
4	Supplement with genetically-appropriate fall chinook salmon.	a	Continue supplementation using Lyons Ferry stock.
		b	Develop adult capture and juvenile acclimation/release facilities in Asotin Creek and Pittsburgh Landing areas on Snake River and selected tributaries to support future broodstock collection & smolt release activities.
		c	Continue summer steelhead program at Lyons Ferry Hatchery using Lyons Ferry stock, and the Oxbow program using adults collected at Hells Canyon Dam.

		d	Begin natural broodstock summer steelhead program in Asotin Creek.
		e	Develop adult capture and juvenile acclimation/release facility in Asotin Creek to support future broodstock collection and smolt release activities.
		f	Discontinue all catchable trout programs in areas where they may jeopardize anadromous restoration activities.
		g	Develop program to restore lamprey populations utilizing either transplantation or artificial propagation.
		h	Monitor, evaluate all artificial production actions.
		i	

### ***Objective schedules and costs***

<b>Obj #</b>	<b>Start date mm/yyyy</b>	<b>End date mm/yyyy</b>	<b>Measureable biological objective(s)</b>	<b>Milestone</b>	<b>FY2000 Cost %</b>
				<b>Total</b>	0.00%

### **Schedule constraints**

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### **Completion date**

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## **Section 5. Budget**

### **FY99 project budget (BPA obligated):**

### ***FY2000 budget by line item***

<b>Item</b>	<b>Note</b>	<b>% of total</b>	<b>FY2000</b>
Personnel		%0	
Fringe benefits		%0	

Supplies, materials, non-expendable property		%0	
Operations & maintenance		%0	
Capital acquisitions or improvements (e.g. land, buildings, major equip.)		%0	
NEPA costs		%0	
Construction-related support		%0	
PIT tags	# of tags:	%0	
Travel		%0	
Indirect costs		%0	
Subcontractor		%0	
Other		%0	
<b>TOTAL BPA FY2000 BUDGET REQUEST</b>			<b>\$ 0</b>

### ***Cost sharing***

<b>Organization</b>	<b>Item or service provided</b>	<b>% total project cost (incl. BPA)</b>	<b>Amount (\$)</b>
		%0	
		%0	
		%0	
		%0	
<b>Total project cost (including BPA portion)</b>			<b>\$ 0</b>

### ***Outyear costs***

	<b>FY2001</b>	<b>FY02</b>	<b>FY03</b>	<b>FY04</b>
<b>Total budget</b>				

## **Section 6. References**

<b>Watershed?</b>	<b>Reference</b>
<input type="checkbox"/>	Draft Multi-Year Anadromous Fish Plan, CBFWA, February 4, 1998
<input type="checkbox"/>	FY1999 Draft Annual Implementation Work Plan, Vol. 1 Tab. 5, CBFWA May 13, 1998
<input type="checkbox"/>	
<input type="checkbox"/>	

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## **PART II - NARRATIVE**

### **Section 7. Abstract**

(Replace this text with your response in paragraph form)

### **Section 8. Project description**

#### **a. Technical and/or scientific background**

(Replace this text with your response in paragraph form)

#### **b. Rationale and significance to Regional Programs**

The Lower Snake River mainstem subbasin extends from Hells Canyon Dam in Idaho to the confluence of the Snake and Columbia rivers in eastern Washington, a distance of about 250 river miles. The mainstem is accessible to anadromous fish only as far upriver as Hells Canyon Dam. There are four federal dams on the lower Snake River, which have a major impact on the subbasin: Ice Harbor, Lower Monumental, Little Goose and Lower Granite.

Major land uses in the subbasin are wilderness and agriculture, with some logging in the tributaries. About 17 percent of the land in the Washington portion of the subbasin is managed by the U.S. Forest Service; 38 percent is rangeland and 40 percent is cropland. The upper subbasin has Forest Service, private and Bureau of Land Management Lands. The upper-most portion contains most of the Hells Canyon National Recreation Area, part of which is designated as wilderness. This also includes a part of the Snake that is designated a Wild and Scenic River.

The indigenous anadromous fish species most actively targeted for management in the Lower Snake River Mainstem Subbasin are fall chinook, spring and summer chinook, and summer steelhead. Coho were extinct in 1986, and re-introduction efforts have been initiated. Little is known about the existing Pacific lamprey populations, and white sturgeon is a species of concern. The goal for these species is to restore sustainable, naturally producing populations to support tribal and non-tribal harvest and cultural and economic practices while protecting the biological integrity and the genetic diversity of the watershed.

The primary limiting factors are loss of spawning and rearing habitat related to reservoir development, passage losses of both juveniles and adults at mainstem dams and reservoirs, and an altered hydrograph below Hells Canyon Dam.

#### **c. Relationships to other projects**

Considerable research and monitoring is being (and has been) done, including studies of fall chinook life history (#9102800, # 9102900), one summer/fall chinook restoration project (#9403400), juvenile fall chinook survival studies (#9801003), and several monitoring studies (#8000200, #8611900, #9204600, #9401004).

The primary native resident fish species targeted for active management in the Lower Snake Subbasin is the white sturgeon. Five regional goals were captured in the Resident Fish Multi-year Implementation Plan (RFMYIP) appendix to the June 4, 1997, Resident Fish Annual Implementation Work Plan (CBFWA 1997). The intent of these goals are two-fold: 1) to conserve, protect and enhance production and distribution of these species throughout their historical range; and, 2) to provide sustainable fisheries, including harvest opportunities. Within the Lower Snake Subbasin, fisheries managers intend to achieve these goals by effecting management objectives that address characteristics of fish populations and fisheries, distribution range, and fisheries characteristics. These objectives, also described in the RFMYIP, include: 1) maintaining and restoring population productivity reduced by hydropower development and operations to healthy levels which provide for consumptive and nonconsumptive uses of native population; and, 2) ensuring sustained population levels of native fish above the minimum viable population sizes which maintain adaptability and genetic diversity. Specific and directed strategies to achieve these objectives for the Lower Snake Subbasin have been identified by the fisheries managers, and are also detailed in the RFMYIP. These strategies include the following: 1) configure and operate the hydropower system consistent with the salmonid recovery plan to maximize spawning and rearing success of white sturgeon; 2) Supplement with artificial production where risks to naturally spawning populations are negligible if abundance of naturally produced white sturgeon cannot be restored to pre-hydrosystem levels; 3) monitor population status of white sturgeon to evaluate effectiveness of restoration efforts and conduct research as needed to ensure success of restoration efforts; and, 4) manage harvest of white sturgeon at the population level based on estimated abundance and exploitation rates which provide optimum sustainable yields.

In 1996, a biological risk assessment of white sturgeon in the Lower Snake River between Hells Canyon and Lower Granite Dams was conducted by the Nez Perce Tribe (Project #9700900). This assessment identified: 1) regional sturgeon management objectives; and, 2) potential mitigation actions needed to restore and protect the population. The risks and uncertainties associated with implementation of potential mitigative actions could not be fully assessed, however, because critical data concerning the status of the population and their habitat requirements are unknown. The tribe is currently collecting the missing data. Based on results of the data collection, an adaptive management plan will be formulated that will: 1) reassess potential mitigative actions; 2) recommend the implementation of needed mitigative action(s); and, 3) present a monitoring and evaluation plan.

The expected outcome of identifying and implementing appropriate mitigative actions to rebuild the white sturgeon population in the Lower Snake Subbasin would be the re-establishment of a sustainable white sturgeon harvest while ensuring a sustained population level above the minimum viable population size necessary to maintain adaptability and genetic diversity.

**d. Project history** (for ongoing projects)

(Replace this text with your response in paragraph form)

**e. Proposal objectives**

The co-managers have adopted the following outcome-based objectives to address problems salmon face during their life in the lower Snake River mainstem include: 1) improve survival of juvenile salmonids; 2) reduce pre-spawning mortality of adult salmonids; 3) improve spawning success; and, 4) supplement with genetically-appropriate fall chinook salmon.

Broad strategies to implement actions in an attempt to achieve the objectives include: 1) continuing fall chinook supplementation using Lyons Ferry stock; 2) developing adult capture and juvenile acclimation/release facilities in the Asotin Creek and Pittsburgh Landing areas on the Snake River and selected tributaries to support future broodstock collection and smolt release activities; 3) continuing the summer steelhead program at Lyons Ferry Hatchery using Lyons Ferry stock and the Oxbow program using adults collected at Hells Canyon Dam; 4) begin a natural broodstock summer steelhead program in Asotin Creek (the program should be phased in with releases occurring as production becomes available); 5) develop adult capture and juvenile acclimation/release facilities in Asotin Creek to support future broodstock collection and smolt release activities; 6) discontinue all catchable trout programs in areas where they may jeopardize anadromous restoration activities; 7) develop a program to restore lamprey populations utilizing either transplantation or artificial propagation, under the overall leadership of the affected tribes; 8) monitor and evaluate all artificial production actions; 9) use adaptive management to determine whether program changes (i.e., release number, size, time, location, and/or life history) are needed in order to meet restoration objectives; and, 10) support and track the PATH effort for assessment of fall, spring and summer chinook and summer steelhead response to breaching the lower four Snake River dams. The DFOP analysis in NMFS's Biological Opinion for fall chinook demonstrated a very quick response (recovery in several generations) with a four pool drawdown to natural river.

Specific actions which implement these strategies include: monitoring and evaluating wild juvenile Snake River spring/summer chinook outmigration (#9102800); and monitoring and evaluating the spawning distribution of fall chinook (#9801003) and the rearing and migration of yearling fall chinook upstream of Lower Granite Dam (#9801004). Project #9801005 funds the development and operations of fall chinook acclimation facilities at Pittsburg Landing, Captain John Rapids, and Big Canyon.

**f. Methods**

(Replace this text with your response in paragraph form)

**g. Facilities and equipment**

(Replace this text with your response in paragraph form)

**h. Budget**

(Replace this text with your response in paragraph form)



## **Section 9. Key personnel**

(Replace this text with your response in paragraph form)

## **Section 10. Information/technology transfer**

(Replace this text with your response in paragraph form)

**Congratulations!**